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## FINE ARTS.

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No. I.

*The SILVER MEDAL was presented to Mr. E. WILDMAN WHITEHOUSE, 4 Francis Terrace, Kentish Town, for his Method of making Casts from soft Anatomical Specimens, either recent or prepared, samples of which have been placed in the Society's Repository.*

4 Francis Terrace, Kentish Town,

SIR,

April 18, 1838.

MAY I request of you the favour to lay the accompanying casts before the Society for their approbation, together with the details of the process; in regard to which, should any thing seem to be omitted, or any further information be required, I shall be happy to render the account as complete and intelligible as lies in my power.

I am Sir, &c. &c.

A. AIKIN, Esq.

E. O. WILDMAN WHITEHOUSE.

Secretary, &c. &c.

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4 Francis Terrace, Kentish Town,

SIR,

April 18, 1838.

THE following is a short account of the process which I make use of in taking casts from pathological specimens, such as those which I have sent to be submitted to the

inspection of the Society of Arts. The preparation or morbid part, whether fresh from the recent subject, or having been preserved in spirit, or in solution of any sort, is wiped as dry as possible, taking care not to leave the impression of the cloth upon any part of it. This is then laid on a flat board of convenient size, having a handle to it, and having been previously well saturated with water, and arranged so as best to display its peculiarities, taking care to fill up such parts as may require it with small pieces of moistened linen rag.

The whole is then slightly fastened down to the board by pins, more particularly such parts as are likely to be disturbed during the subsequent immersion in the composition.

A hollow tin vessel, of the shape of a half-cylinder, and of a size to admit the specimen, is to be placed on a frame in an inclined position (from  $30^{\circ}$  to  $40^{\circ}$ ), having the flat side downward; the requisite quantity of composition is to be put into it, and is to be melted, and then kept at a proper temperature by means of a lamp. The board with the preparation on it is then to be slowly introduced into the fluid; and, from its oblique position, the bubbles of air are detached from the preparation, being driven out by the melted composition.

Being withdrawn and allowed to set, which it does in a few seconds, the immersion is repeated a second, a third, and if necessary a fourth time, according to the size of the preparation and the required strength of the mould.

It is then plunged in cold water for a minute or two, when it may be handled gently without fear of injury, and the pins be readily withdrawn by a rotatory movement. Being now again plunged into cold water and

allowed to remain for some time, the mould will become hard, and may be separated from the slab without difficulty, the preparation, if soft and fresh, almost falling out of its own accord; if hard or containing bone, being extricated with but little trouble; while some few, from their shape, may require to have been cut with threads in the usual manner. This, however, should be avoided if possible; the subsequent mark, or its erasure, lessening greatly the delicacy of the cast.

The mould (not requiring any oil) may then be filled with plaster in the ordinary way; this having set, it may be immersed in water a few degrees below blood heat, when the mould will, of course, become softened, and may be detached from the most delicate parts without risk, being torn off, bit by bit, in such a manner as may best suit the shape of the cast.

It will readily be perceived that each mould can thus yield but one cast; yet, in cases where the preparation does not present any great unevenness of surface, two, three, or even more casts, may be obtained in consequence of the plastic nature of the mould. But from the expedition and facility with which they may be made without injury to the original, this would seem hardly worth notice; and I may here state that, without the assistance of any individual, I have, in eight successive hours (without previous preparation) made fourteen perfect moulds.

The cast being finished, and any adherent particles of the mould being removed by a fine-pointed instrument or stilette, a smooth and even coat of the finest olive or almond oil is to be laid on; this becoming absorbed, the surface is ready for the immediate reception of water-colours, the artist using, at his discretion, more or less of fresh ox-gall.

The composition for the mould consists of Burgundy pitch, one pound; pure bees'-wax, one pound; yellow resin, two ounces; mutton suet clarified, four ounces; of which latter ingredient, more or less will be required to be added, from time to time, to supply the evaporation from repeated remeltings.

By increasing the proportion of suet, we lower the melting point of the composition; and by thus reducing it below blood-heat, I have, more than once, made it applicable to casting from the living subject.

I am, Sir, &c. &c.

E. O. WILDMAN WHITEHOUSE,

*A. AIKIN, Esq.*

*Secretary, &c. &c.*

Articled Student of

Royal College of Surgeons.

The specimens exhibited have been placed in the Society's Repository, and consist of an uterus and ovaries, and of a heart cut open to shew the valves and other details of its internal structure.

Mr. C. H. Smith, a member of the Society, having stated to the Committee the method employed by him in obtaining a cast in plaster of Paris, from a clay model in bass-relief of flowers, or other small delicate ornaments, was requested by the Committee to furnish a copy in writing of the same to be appended to Mr. Whitehouse's paper, which he complied with as follows:—

If the ornaments are small, it is advisable to model them on a ground of plaster of Paris, or any other absorbent material that will keep the clay constantly damp.

Melt as much bees'-wax as will fill up all the cavities, and cover every part of the work, an eighth or a tenth of an inch in thickness. As soon as the whole of the wax is melted, and immediately after having sprinkled the model with warm water, pour the melted wax over the whole of it, filling up all the cavities. By the time the work is completely covered, the coldness of the model will have set or hardened a certain quantity of the wax nearest to the clay, which will admit of the surplus, or so much of the wax as yet remains in a fluid state, being poured off; leaving every part of the ornaments covered with a layer of wax about the eighth or tenth of an inch in thickness. Upon this put a backing of plaster to strengthen it sufficiently to handle the model and mould without risk of breaking.

A mould thus formed, will very easily separate from the model; and after having picked and washed the clay out of the mould, a little sweet oil brushed over it, will prepare it for casting with plaster in the usual manner. When the cast is thoroughly set, the plaster backing of the mould is to be knocked off with a chisel, as is usual with waste moulds, and the wax will very readily peel off without damaging the cast, especially if it be placed at a moderate distance before a fire, for about a quarter of an hour, just sufficient to render the wax a little plastic.

In cold weather, a little oil or lard melted with the wax, will materially assist its removal from the cast.

C. H. SMITH,

29 *Clipstone Street*,  
*November, 1838.*